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Abstract	Perceptions of current family functioning in relation to current household income level, educational status, social-class at birth and social mobility over the lifecourse were investigated in a group of 483 individuals at age 50. Subjective report of family functioning was assessed using the McMaster Family Assessment Device (FAD) with socio-economic information obtained from a self-report Health and Lifestyle Questionnaire. Results indicated significant relationships between household income, social mobility and FAD scores for men but not for women in this sample. For men, lower current income and downward social mobility over the lifecourse were associated with a more negative perception of family functioning. Further research is required to understand the gender differences observed and delineate cause versus effect mechanisms.

Keywords (separated by '-')	Family functioning - Gender - Social mobility - Socio-economic status
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ORIGINAL PAPER

The Impact of Socio-economic Status and Mobility on Perceived Family Functioning

Paul A. Tiffin · Mark Pearce · Carole Kaplan · Trian Fundudis · Louise Parker

Abstract Perceptions of current family functioning in relation to current household income level, educational status, social-class at birth and social mobility over the lifecourse were investigated in a group of 483 individuals at age 50. Subjective report of family functioning was assessed using the McMaster Family Assessment Device (FAD) with socio-economic information obtained from a self-report Health and Lifestyle Questionnaire. Results indicated significant relationships between household income, social mobility and FAD scores for men but not for women in this sample. For men, lower current income and downward social mobility over the lifecourse were associated with a more negative perception of family functioning. Further research is required to understand the gender differences observed and delineate cause versus effect mechanisms.

Keywords Family functioning · Gender · Social mobility · Socio-economic status

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Understanding the ways in which the economic environment may influence views on one's family life is important when attempting to support a family system facing financial adversity. According to ecological theory, a family's socio-economic environment is a key component of the *macrosystem* in which the family is embedded, coloring and setting the tone for individual perceptions of both relationships and overall family (Bronfenbrenner 1979). Therefore it could be hypothesized that individuals from less economically advantaged backgrounds may perceive their family as functioning poorer than those who are more advantaged. In this postulated situation there would be opportunities for both *social drift* (Wender et al. 1973) and *social causation* (Hollinshead and Redlich 1958) mechanisms to act. Indeed, in terms of individual psychological adjustment and socio-economic status (SES) there is evidence that both processes are at work (Costello et al. 2003; Miech et al. 1999). It therefore would be expected that an association between poorer family functioning and low SES would also be observed.

Relatively little previous empirical work exists that has reported the potential influence of SES on perceived family functioning. Moreover, findings regarding the influence of socio-economic environment on family functioning have not been consistent but have varied according to the population studied, the evaluation instruments employed and the indices of SES utilized (Baer 1999; Maziade et al. 1987; Roelofse and Middleton 1985). However, some attempts have been made to develop and explore specific measures of family functioning for the purposes of economic research, recognizing the importance of this construct (Owen et al. 1992).

A number of studies have reported significant associations between lower SES and perceptions of poorer family functioning: One Canadian survey of 1,869 randomly selected families participating in the Ontario Child Health Study and used the *General Functioning* subscale of the McMaster Family Assessment Device (FAD) to assess overall family functioning (Byles et al. 1988). The authors reported a very small, but statistically significant, inverse correlation between the *General Functioning* subscale score of the FAD and family income. Likewise, a survey of family functioning in 143 inner city families in Newcastle-upon-Tyne was performed using the FAD (Clark et al. 2000). The scores on all seven subscales of the FAD were analyzed to assess their respective correlation with six different measures of disadvantage. *Dependency on social welfare* (DSW) and *Educational Disadvantage* (ED, defined as neither parent in the family having achieved an educational or vocational qualification) were two measures that relate directly to accepted measures of SES such as educational attainment and family income. All seven subscales of the FAD were significantly correlated with the presence of DSW. Only two of the FAD sub-scales correlated significantly with ED—*Communication* and *Roles*.

The Family Functioning in Adolescence Questionnaire (FFAQ) was developed in order to evaluate the perceptions of family functioning in 12–18-year-old. In the sample of 413 Australian students used to validate the questionnaire it was observed that those from *Professional* families with high incomes (this was not further defined) reported their families as more *healthy* across all the six domains assessed (Roelofse and Middleton 1985). A study of 204 families reported that elements of SES (parental occupation, education and household income) were significantly correlated with two of the seven subscales of the Family Environment Scale (FES), designed to report the social and emotional functioning of the family (Moos 1974). These two scales were *Active Recreational Orientation* and *Intellectual-Cultural Orientation*, designed to report the level of family involvement in stimulating leisure activities. Subscales; such as, *Expressiveness* reporting constructs more related to emotional issues, were not significantly associated with SES.

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Not all studies investigating perceptions of family functioning and SES have reported significant associations: In a study of 118 randomly selected Canadian families with children, a semi-structured interview was employed to evaluate the participants with respect to two of the six dimensions of the McMaster Model of Family Functioning (Epstein et al. 1978). The authors reported that SES (based on parental occupation) was not significantly correlated with either the *Behavior Control* or the *Communication* ratings, the two dimensions evaluated (Maziade et al. 1987). Also, a survey of over 5,000 adolescents, using the conflict subscale of the FES (Moos and Moos 1986), observed that family SES, as indexed by parental occupation and education level, made little contribution to the variance in the level of family conflict reported (Baer 1999). Moreover, a survey of 197 mothers (including a subgroup who had been identified by healthcare professionals as *neglectful*) reported that educational level and family income were not predictive of self or caseworker ratings of family functioning—measured by the Beavers Self-Report Family Inventory (SFI) and Family Evaluation Measure (FEM), respectively (Meyers et al. 2002). A survey of couples in India reported that those families living in poverty were more likely to experience physical or verbal aggression in their family life than those in less economically disadvantaged conditions. However, overall there was no significant difference between *poor* and *non-poor* couples in the level of satisfaction with family life reported (Abbott et al. 2004). Taken together, the reports from the above studies suggested that some components of SES may be associated with certain patterns of perceived family functioning in a variety of population samples. However, a close association between these two constructs has been far from a universal finding.

There is also some evidence from previous research that men and women may react differently to financial or other stressors when appraising the quality of their interpersonal relationships. One study of North American farm business-owning couples reported that for wives, but not husbands, business tensions were negatively related to subjective satisfaction with the spousal relationship (Amarapurkar and Danes 2005). In addition, a study of gender differences in overall health perceptions in 238 mildly hypertensive patients in Israel reported that women rated both their physical health and family functioning as significantly poorer than male participants did, with these differences partly being explained by SES (Beiser et al. 1998). A longitudinal study of household income and marital happiness was conducted during the 1980s. This reported that overall increases in family income had no significant effect on men's marital satisfaction. However, both increases in absolute family income and the proportion provided by the wife were associated with increased marital happiness for the woman. Conversely, a decrease in male marital satisfaction and well-being was associated with an increase in the proportion of household income provided by the wife (Wells et al. 1985). The findings from a Dutch study of middle-aged couples suggested that such economic influences on marital satisfaction may be mediated by cultural factors. However, economic factors appear to be more powerful than cultural factors in predicting changes in marital satisfaction over time (Van den Troost et al. 2006). Indeed, there is evidence that, to some extent, the influence of SES on marriage and family stability is generalizable to non-western cultures (Takyi and Broughton 2006).

The authors of the present study utilized data from a cohort in Northeast England of the United Kingdom to obtain findings that add to the current scant body of research in this area. Both deficits in income and educational status are linked to a variety of adverse psychological and physical health outcomes (Rutter 1989; Vescio et al. 2003; Wilhelm et al. 2000). Both of these aspects of SES are interlinked. Indeed, educational status may be more predictive of financial status in middle age in *Early Boomers* (born between 1946 and

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1957) than preceding generations (Finke et al. 2006). The present study was an opportunity to explore their comparative effects on perceived family functioning.

Methods

In order to explore the relationship between SES and perceived family functioning the three explanatory variables we utilized were (a) household income (b) educational status and (c) occupational social class (UK Registrar General's Classification). Traditionally, in the United Kingdom, the Registrar General's Occupational Social Class system has been used as a measure of SES. This attributes a social class according to the occupation of an individual with more skilled jobs being allocated to higher social classes (i.e., I and II) and the less skilled workers being placed in lower categories (e.g., IV and V). Thus, occupational social class represents something of a composite between educational level (i.e., more skilled jobs require a more intensive education) and income (i.e., in general those in more skilled jobs tend to receive higher wages).

In terms of our outcome variable (perceived family functioning) we utilized the FAD. In terms of self-reporting family functioning this is one of the most widely researched tools available (Ridenour et al. 1999) comprised of a 60-item self-report questionnaire intended to assess subject's views of own family functioning (Epstein et al. 1978, 1983). Subjects respond to each probe item by selecting a response from a four-point Likert scale (*strongly agree/agree/disagree/strongly disagree*). The questionnaire is divided into seven subscales: (a) *problem solving*, (b) *communication*, (c) *roles*, (d) *affective Responsiveness*, (e) *affective involvement*, (f) *behavior control* and (g) *general functioning* (see Table 1 for meanings). The FAD takes about 15–20 min to complete, requiring a reading age of around 10 years. Scores for each scale are averaged rather than totaled, ranging from 1.0 (*healthy*) to 4.0 (*unhealthy*). The FAD has been validated in a number of ways (Epstein et al. 1983; Miller et al. 1985; Olson et al. 1982, 1985; Sawyer and Sarris 1988).

The study was predominantly cross-sectional in nature, utilizing data collected from a UK population (recruited at birth as part of a wider study) at age 50 years. However, prospectively collected information on social class at birth was also available which

Table 1 The meaning of the seven subscales of the Family Assessment Device (FAD)

Subscale	Meaning
Problem solving	The ability of a family to solve problems that threaten the integrity and function of the family unit
Communication	The ability of members to exchange information in a direct and clear way
Roles	This measures whether members have well defined roles which contribute to different areas of family functioning
Affective responsiveness	The ability of family members to experience appropriate feelings in response to situations
Affective involvement	The degree to which members are emotionally concerned and interested in each other
Behavior control	The ability of a family to maintain standards of behavior
General functioning	Reflects overall health or pathology of a family

Note: From Epstein et al. (1978)

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allowed a longitudinal component to the analysis. Thus, we were able to explore the relationship between SES and perceived family functioning, testing three hypotheses:

1. Perceptions of family functioning in all areas assessed by the FAD would be positively related to the level of household income reported, in both men and women.
2. Perceptions of family functioning in all areas assessed by the FAD would be positively related to the educational status of an individual in both men and women.
3. Perceptions of family functioning would be related to change in Social Class over the lifecourse (0–50 years) in both men and women.

Study Sample and Data Collection

The "Newcastle Thousand Families Study" began as a prospective study of all 1,142 children born in May and June 1947 to mothers resident in the city of Newcastle-upon-Tyne (Miller et al. 1960). Two thirds of these children were followed up until the age of 15 years, with detailed information collected prospectively on their health, growth and socio-economic and familial circumstances (Lamont et al. 1998). Participants in this investigation were members of the cohort who were either traced through the National Health Service Central Register, or who contacted the study team in response to media publicity. Between October 1996 and December 1998, self-completion questionnaires on health and lifestyle were sent out. Of the original cohort, 832 (86% of the surviving 967 children whose families remained in Newcastle for at least the first year of the study) were traced at age 50 and sent questionnaires by mail.

Outcome, in terms of family functioning was assessed by the 60-item FAD (Epstein et al. 1983). Respondents were instructed to complete the FAD for their current families. Socio-economic status at birth was measured by paternal occupational social class, as recorded prospectively by the Health Visitors attending to the families in 1947. Occupational social class of the main wage earner in the household was derived from the self-completion questionnaire on health and lifestyle at age 50, which also included household income at age 50 and academic and vocational qualifications up to that age. Regarding income, the respondent indicated the range into which the household income fell, after taxation and including any allowances, benefits or pensions received. Subjects were placed accordingly into one of four educational categories (Table 2) and four household income bands (Table 3). Social mobility was classified into three groups (upward, stable, downwards) according to whether social class of origin was higher, the same or lower than that reported by the participant at age 50. For purposes of this study social classes IIIm (skilled-manual) and IIIn (skilled non-manual) were grouped together.

Statistical Methods

As the distribution of FAD scores were not normally distributed non-parametric tests for significance were used. How representative participants in this study were in relation to the original cohort was tested using χ^2-tests. Intercorrelations between the FAD subscale scores were assessed using Spearman's rank correlation. The association between FAD scores and SES was evaluated using the Kruskal–Wallis test. Multivariable analysis was performed using linear regression when evaluating the association between FAD scores and educational level, controlling for household income. Standardized regression

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Table 2 The number of subjects by sex and educational level category at age 50 years

Educational level	Male (n = 211)	Female (n = 270)	Totals (n = 481)
1[a]	37	92	129
2[b]	107	122	229
3[c]	29	29	58
4[d]	38	27	65
Total	211	270	481

Note: χ^2 for gender differences in educational level = 19.35, $P < 0.0001$

[a] No formal qualifications

[b] This category included CSE (Certificate of Secondary Education) and O-level (*Ordinary Level*) passes and also basic vocational qualifications such as *City and Guilds* Certificates, National Vocational Certificates (up to level 3) and the completion of formal Trade Apprenticeships

[c] This included any passes at A-level (Advanced Level), Higher National Diploma (HND) or any vocational qualifications that were approximately equivalent to Advanced Levels exams. For example, Nursing Diplomas (but not degrees) were included in this category

[d] Degree level qualification or higher

Table 3 Number of subjects placed in each income band according to self-reported annual household income after taxation with approximate values in US dollars ($) given in parentheses

Income band	Income after tax in 1997 in UK pounds ($)	Male (n = 213)	Female (n = 270)	Total (N = 483)
1	£0–£9,999 ($0–$16,500)	29	53	82
2	£10,000–£19,999 ($16,000–$33,300)	70	87	157
3	£20,000–£29,999 ($33,300–$50,000)	60	64	124
4	>£30,000 (>$50,000)	50	57	107
Total		209	261	470

coefficients, denoting the increase in an outcome variable for a standard deviation increase in the explanatory variable, are presented with corresponding 95% confidence intervals. A non-parametric test for trend (Cuzick 1985) was performed to assess the significance of trends across SES categories in relation to the FAD Scores. The statistical software package Stata©, version 7.0 (2002) was used for all analyses.

Results

Sample Characteristics

The FAD was returned completed in 491 cases (60% completion rate for eligible subjects). Four twin pairs were excluded from the analysis. Of the remaining 483 subjects who returned completed FADs, information on income was available on 470 subjects (97%) and educational data was available in 481 cases (99.7%). The 483 subjects represented 43% of the initial 1947 population surveyed. There was no statistically significant difference in the social class of origin between the original birth cohort and those who completed the FAD, for either men ($\chi^2 = 3.33$, $P = 0.5$) or women ($\chi^2 = 8.46$, $P = 0.08$), although there was a trend for the latter to be from a higher social class of origin. Eighty-five percent of the men

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(180 of 213) and 80% of the women (217of 270) in the sample were married at the time of the survey, with no significant gender difference in marital status found ($\chi^2 = 1.39$, $P = 0.24$).

In terms of household composition, the majority (67%) of households consisted of two or three members, usually a married couple, often with one other related adult over 16 years. In a married couple only the partner who was in the original study cohort in 1947 completed the survey. Significantly fewer subjects who completed the FAD lived alone, compared to those who completed the health and lifestyle questionnaire but not the FAD ($\chi^2 = 54.38$, $P < 0.001$). There was a significant association between gender and educational level ($\chi^2 = 19.35$, $P < 0.0001$), with men reporting higher average education levels than women (Table 2). The median household income band was £10,000–£19,999. There was no significant difference in household income between men and women ($P = 0.12$) (Table 3). Household income and educational level were significantly correlated in both men ($\rho = 0.32$, $P < 0.0001$) and women ($\rho = 0.38$, $P < 0.0001$). The mean FAD scores for each subscale are reported in Table 4. There were no significant differences in the FAD scores between male and female respondents for any of the seven subscales. The scores on the FAD subscales were all significantly ($P < 0.0001$) correlated with each other (Spearman's Rho values ranged from 0.72 [*Affective Responsiveness*/*General Functioning*] to 0.46 [*Roles*/*Problem Solving*]).

Perceptions of Family Functioning and Household Income (Hypothesis 1)

In men there were significant associations between household income and all subscale scores of the FAD, with the exception of *Problem Solving* (Table 5). In women, although there was a significant difference between household income groups for the *Roles* subscale score, the trend across groups did not reach statistical significance (Table 6). Two items that are included in the *Roles* subscale were likely to be directly related to a family's economic circumstances, namely items number eight and 23. Item number eight is *we sometimes run out of things we need*. Item number 23 is *we have trouble meeting our bills*. When the analysis was repeated, after omitting these two items, the association between family income and mean *Roles* scores remained significant (household income/Roles $\chi^2 = 44.28$, $P = 0.0001$). The association between FAD scores and household income observed in men was reduced in magnitude once educational level was controlled for,

Table 4 Median values for the FAD scores by sex with corresponding inter-quartile ranges (IQR)

Subscale	Males (n = 213)		Females (n = 270)		Combined (N = 483)	
	Median	IQR	Median	IQR	Median	IQR
Problem solving	2.00	1.83–2.16	2.00	1.67–2.17	2.00	1.67–2.17
Communication	2.11	1.89–2.33	2.11	1.78–2.25	2.11	1.89–2.33
Roles	2.18	2.00–2.45	2.18	2.00–2.45	2.18	2.00–2.45
Affective responsiveness	2.00	1.67–2.33	2.00	1.67–2.33	2.00	1.67–2.33
Affective involvement	2.00	1.71–2.14	2.00	1.57–2.14	2.00	1.71–2.14
Behavior control	1.89	1.56–2.11	1.78	1.56–2.00	1.89	1.56–2.00
General functioning	1.83	1.58–2.00	1.75	1.50–2.00	1.83	1.5–2.00

Note: The range of possible scores obtainable on each subscale is 1–4

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although the association remained significant in all but two subscales (*Behavioral Control* and *General Functioning*).

Perceptions of Family Functioning and Educational Status (Hypothesis 2)

There was a significant trend observed in men for decreasing educational level to be associated with increased FAD scores on only one subscale (*Behavior Control*) ($P = 0.04$). In women three trends of statistical significance were observed regarding FAD scores and educational level; decreasing educational level was associated with increasing FAD scores in three subscales; *Roles* ($P = 0.01$), *Affective Responsiveness* ($P = 0.04$) and *Behavior Control* ($P = 0.04$). However in both sexes, the associations between educational level and

Table 5 Median Family Assessment Device (FAD) subscale score with inter-quartile ranges (IQR) for male participants ($n = 209$) in each income band (1–4) with corresponding p values for inter-group difference and trend

Subscale	Income band	Median	IQR	*P* value	*P* for trend
Problem solving	1 (Lowest)	2.00	1.83–2.17	0.27	0.8
	2	2.00	1.67–2.33		
	3	2.00	1.83–2.17		
	4 (Highest)	2.00	1.67–2.17		
Communication	1 (Lowest)	2.33	2.11–2.67	0.0001	<0.01
	2	2.11	2.11–2.33		
	3	2.17	2.00–2.44		
	4 (Highest)	2.00	1.78–2.11		
Roles	1 (Lowest)	2.55	2.27–2.73	0.0001	<0.01
	2	2.18	1.91–2.45		
	3	2.22	2.00–2.36		
	4 (Highest)	2.09	1.91–2.27		
Affective responsiveness	1 (Lowest)	2.33	2.00–2.5	0.01	0.04
	2	2.00	1.67–2.17		
	3	2.17	1.67–2.50		
	4 (Highest)	1.92	1.5–2.17		
Affective involvement	1 (Lowest)	2.29	2.00–2.71	0.002	0.02
	2	1.86	1.57–2.14		
	3	2.00	1.86–2.14		
	4 (Highest)	2.00	1.71–2.14		
Behavior control	1 (Lowest)	2.22	1.89–2.33	0.006	<0.01
	2	1.89	1.56–2.11		
	3	1.89	1.67–2.00		
	4 (Highest)	1.89	1.56–2.00		
General functioning	1 (Lowest)	2.00	1.75–2.17	0.02	0.03
	2	1.83	1.58–2.00		
	3	1.83	1.67–2.04		
	4 (Highest)	1.75	1.50–2.00		

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Table 6 Median Family Assessment Device (FAD) subscale score with inter-quartile ranges (IQR) for female participants ($n = 261$) in each income band (1–4) with corresponding P values for inter-group difference and trend

Subscale	Income band	Median	IQR	P	P for trend
Problem solving	1 (Lowest)	2.00	1.5–2.00	0.75	0.4
	2	2.00	1.67–2.00		
	3	2.00	1.67–2.17		
	4 (Highest)	2.00	1.83–2.00		
Communication	1 (Lowest)	2.11	1.78–2.44	0.96	0.9
	2	2.11	1.78–2.22		
	3	2.11	1.89–2.28		
	4 (Highest)	2.00	1.89–2.22		
Roles	1 (Lowest)	2.33	2.09–2.64	0.03	0.1
	2	2.18	2.00–2.45		
	3	2.23	1.95–2.45		
	4 (Highest)	2.18	1.91–2.27		
Affective responsiveness	1 (Lowest)	2.16	1.83–2.5	0.34	0.2
	2	2.00	1.67–2.17		
	3	2.00	1.58–2.33		
	4 (Highest)	2.00	1.5–2.33		
Affective involvement	1 (Lowest)	2.00	1.71–2.29	0.75	0.7
	2	2.00	1.57–2.14		
	3	2.00	1.57–2.14		
	4 (Highest)	2.00	1.57–2.14		
Behavior control	1 (Lowest)	2.00	1.56–2.11	0.45	0.13
	2	1.78	1.56–2.00		
	3	1.78	1.56–2.00		
	4 (Highest)	1.78	1.56–2.00		
General functioning	1 (Lowest)	1.83	1.58–2.08	0.56	0.65
	2	1.67	1.42–1.92		
	3	1.83	1.42–2.00		
	4 (Highest)	1.75	1.58–2.00		

FAD scores did not remain significant once household income was controlled for in a regression analysis.

Perceptions of Family Functioning and Change in Social Class over the Lifecourse (Hypothesis 3)

Significant trends were observed for social mobility and certain subscale scores of the FAD in men (Table 7) but not women (Table 8). There were statistically significant trends for upwardly mobile men to report their families as healthier in the FAD domains of *Communication*, *Roles*, *Affective Responsiveness*, *Affective Involvement* and *Behavior Control* (see Table 7).

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Table 7 Social mobility (social class of origin versus social class reported at age 50) and median Family Assessment Device (FAD) scores with inter-quartile ranges (IQR) for each of the seven FAD subscales in men (n = 208)

Subscale and social mobility		Median	IQR	P	P for trend
Problem solving	Upward	2.00	1.83–2.17	0.09	0.5
	Stable	2.00	1.50–2.00		
	Downward	2.00	1.83–2.17		
Communication	Upward	2.11	1.78–2.33	0.02	0.03
	Stable	2.11	1.78–2.33		
	Downward	2.22	2.11–2.44		
Roles	Upward	2.18	1.91–2.27	0.01	<0.01
	Stable	2.18	2.00–2.36		
	Downward	2.36	2.09–2.55		
Affective responsiveness	Upward	2.00	1.67–2.33	0.02	0.02
	Stable	2.00	1.50–2.33		
	Downward	2.17	1.83–2.50		
Affective involvement	Upward	2.00	1.71–2.14	0.04	0.02
	Stable	2.00	1.71–2.29		
	Downward	2.14	1.86–2.29		
Behavior control	Upward	1.83	1.56–2.00	0.02	0.01
	Stable	1.89	1.67–2.11		
	Downward	2.00	1.78–2.22		
General functioning	Upward	1.83	1.50–2.00	0.1	0.2
	Stable	1.83	1.50–2.00		
	Downward	1.92	1.67–2.17		

Discussion

There was some support for the hypothesis that a positive view of family functioning was related to household income. However, this relationship was only observed in the men in our sample, the only exception being the *Problem Solving* subscale. This association was far less marked in women with only the *Roles* subscale scores modestly associated with household income. This survey did not find any evidence that Social Class of origin per se influenced perceptions of family functioning later in mid-life. However, those men who had experienced an increase in social class between birth and age 50 were more likely to report healthier family functioning across a number of domains. In this middle-aged sample from Northeast England, the finding of associations between current FAD scores and social mobility in men but not in women could be explained in a variety of ways:

1. Men from this sample may construct a view of themselves and their families that is closely associated with their role as the family economic provider. When the family struggles financially the men take a negative view of both their own ability to support the family and family life in general. Conversely, women from this sample may see their role as primarily offering emotional support and care to the family with their ability to provide financially viewed as of secondary importance. Thus, their overall view of family life is less influenced by household income or social mobility, when compared to men.

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Table 8 Social mobility (social class of origin versus social class reported at age 50) and median FAD scores with inter-quartile ranges (IQR) for each of the seven FAD subscales in women (n = 261)

Subscale and social mobility		Median	IQR	P	P for trend
Problem solving	Upward	2.00	1.70–2.17	0.4	0.3
	Stable	2.00	1.83–2.00		
	Downward	2.00	1.50–2.17		
Communication	Upward	2.00	1.78–2.24	0.5	0.8
	Stable	2.11	1.89–2.33		
	Downward	2.00	1.78–2.22		
Roles	Upward	2.18	1.91–2.36	0.4	0.5
	Stable	2.18	2.00–2.45		
	Downward	2.18	2.00–2.45		
Affective responsiveness	Upward	2.00	1.50–2.17	0.3	0.6
	Stable	2.00	1.83–2.33		
	Downward	2.00	1.50–2.33		
Affective involvement	Upward	2.00	1.64–2.14	0.7	0.4
	Stable	2.00	1.57–2.14		
	Downward	1.86	1.57–2.14		
Behavior control	Upward	1.78	1.56–2.00	0.5	0.7
	Stable	1.89	1.56–2.00		
	Downward	1.83	1.56–2.00		
General functioning	Upward	1.79	1.42–2.00	0.9	0.9
	Stable	1.75	1.50–2.00		
	Downward	1.75	1.42–2.00		

2. Men who have experienced reduced SES over the lifecourse may have less ability to function well in an individual and family capacity, having formed less well functioning families than those who experienced upward social mobility.

Option 1 is a strong possibility and is supported by separate findings from this cohort that downward social mobility but not low SES of origin per se is associated with reduced self-reported mental well-being in men but not women (Tiffin et al. 2005). Option 2, while feasible, does not provide a clear explanation of the gender differences observed. However, our data only allow us to comment on perceptions of family functioning as (arguably) more objective measures were not included as outcome variables. The absence of an observed association between the *Problem Solving* subscale and household income in our population is not easy to explain. One possibility is that those families who have faced chronic economic adversity become more expert at problem solving through necessity.

There was little evidence to support an independent association between educational status and FAD subscale scores. However, the effect of family income also appeared to be reduced when controlled for educational level. It is therefore likely that educational status makes some contribution to family perceptions, but that it is a relatively minor one of dubious clinical significance.

Findings relating to SES and FAD scores were largely in line with those reported by Clark et al. (2000) in that poorer economic circumstances are associated with a greater degree of perceived dysfunction as measured by the FAD, with *Roles* demonstrating the

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highest degree of correlation with SES of the seven subscales. Also in line with our findings is the report by a Canadian study, which included a larger number of subjects, reporting a significant but very weak correlation between family income and *General Functioning* scores on the McMaster Family Interview (Byles et al. 1988). Conversely these findings contrast with those reported by another, smaller Canadian study which found no association between the two domains of the FAD evaluated (*Communication* and *Behavior Control*) and SES as estimated by social class (Maziade et al. 1987). This may have been due to the use of the FAD versus a semi-structured interview, the use of social class rather than income to evaluate SES, the smaller numbers of subjects involved (leading to reduced statistical power) or actual differences that existed between the two populations in terms of family functioning. Methodological variations may also influence findings, particularly in relation to women: Traditionally Social Class is based on the occupation of the *head of household*, and this may bias findings relating, for instance, to homes where a woman is caring full-time for children but separated from an earning partner. Our study adds to the findings of the above studies, in that an analysis by gender was performed, highlighting the sex differences reported.

The present findings imply that where reports of family functioning are concerned, it is primarily income rather than educational status that is of importance. The distinct findings regarding these two components of SES strongly suggest that studies evaluating the effects of the socio-economic environment must be clear about which aspects of SES are serving as explanatory variables for outcomes. Our findings would also strongly suggest that where subjective reports of family functioning are utilized, analysis by gender should always be considered.

The high degree of intercorrelation between the subscale scores of the FAD would highlight that the constructs that each taps into are far from independent. The subscales that showed a relatively high degree of correlation with household income in men were the *Roles*, *Communication*, and *Behavior Control* subscales. The *Roles* subscale score reflects the degree to which the respondent perceives that tasks in the family are divided in an equitable and well demarcated way. *Roles* also includes aspects of organizational function. For example, one *Roles* item is *we make sure that family members fulfil their responsibilities*. The poorer scores on this subscale in men in low income groups could therefore reflect a negative view about change in family roles, perhaps due to job loss. The survey was conducted in the late 1990's, at a time when employment patterns were changing, with an increase in unemployment in men and increasing numbers of women gaining jobs in service industries. A further possibility is that those men in poorer paid employment may see themselves as having less control over the organization and discipline in their families. Regarding this, there is evidence that those in low paid jobs have an increased tendency to have an external locus of control. This may also be reflected in the increased scores on the *Behavior Control* subscale in men in the low-income groups. The *Communication* subscale reflects the extent to which respondents view their families as communicating in a direct, clear and unambiguous manner with each other. It is difficult to say why scores on this subscale in particular should be raised, but men from lower income groups did perceive their families as being more dysfunctional in this respect.

There were several limitations to this study: The study sample is unusual in that all the subjects are approximately the same age at the time of evaluation (50 years) and of similar ethnic backgrounds (i.e. Caucasian British). It is therefore not clear to what degree the results could be generalized to other populations. The study sample were all initially part of a larger study which was started in 1947 and the 50-year follow-up sample reported on here represents 42% of the original cohort. This is a relatively high follow-up rate given the

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period of follow-up, and the sample has been shown to be representative of the original cohort in terms of early life factors (Parker et al. 2003). Nevertheless, it is a possibility that selection bias due to attrition has influenced the results. Those who failed to complete the FAD, but did complete the other *health and lifestyle* questionnaires were significantly more likely to live alone. This may be because those respondents who did not live with family members assumed the FAD questionnaire was not relevant to them. Family functioning was evaluated via self-report, and it is possible that the use of semi-structured interviews, such as those employed by Maziade et al. (1987) could have increased the reliability and validity of this measure.

Perhaps the most significant limitation to this study is that there are no data available on the functioning of the family of origin. Such a measure would have assisted with unraveling *cause* and *effect* mechanisms. As it is, it could be tentatively suggested that the relatively stronger associations observed between cross-sectional SES in men and FAD scores, compared to the lack of an association with social class of origin, could point to a relatively stronger contribution from a *causal* rather than a *selection* mechanism. Moreover, the association between FAD scores and social mobility was not as strong or as pervasive as that between FAD scores and household income at age 50. Again, this hints at a more significant influence of *social causation* rather than *selection*. However, further research would be required to comment further on this complex issue.

Conclusions

This study explored the relationship between cross-sectional and longitudinal SES and perceived family functioning in a sample of men and women aged 50. Our results suggest that middle-aged men's views of their family functioning are more sensitive to the economic status of the family and their individual social mobility when compared to women. Moreover, household income was a better predictor of reported family functioning than educational status. Further investigation aimed at exploring the meaning behind such gender differences and unraveling *cause* and *effect* mechanisms relating to the impact of socio-economic disadvantage is required.

References

Abbott, D. A., Sharma, S., & Verma, S. (2004). The emotional environment of families experiencing chronic poverty in India. *Journal of Family and Economic Issues, 25*(3), 387–409.

Amarapurkar, S. S., & Danes, S. M. (2005). Farm business-owning couples: Interrelationships among business tensions, relationship conflict quality, and spousal satisfaction. *Journal of Family and Economic Issues, 26*(3), 419–441.

Baer, J. (1999). The effects of family structure and SES on family process in early adolescence. *Journal of Adolescence, 22*(3), 341–354.

Beiser, M., Sack, W., Manson, S. M., Redshirt, R., & Dion, R. (1998). Mental health and the academic performance of first nations and majority-culture children. *American Journal of Orthopsychiatry, 68*(3), 455–467.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Byles, J., Byrne, C., Boyle, M. H., & Offord, D. R. (1988). Ontario child health study: Reliability and validity of the general functioning subscale of the McMaster Family Assessment Device. *Family Process, 27*(1), 97–104.

Costello, E. J., Compton, S. N., Keeler, G., & Angold, A. (2003). Relationships between poverty and psychopathology: A natural experiment. *Journal of the American Medical Association, 290*(15), 2023–2029.

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MS Code : 9077 | CP | DISK

Clark, A. F., Barrett, L., & Kolvin, I. (2000). Inner city disadvantage and family functioning. *European Child & Adolescent Psychiatry, 9*(2), 77–83.

Cuzick, J. (1985). A Wilcoxon-type test for trend. *Statistics in Medicine, 4*(1), 87–90.

Epstein, N. B., Baldwin, L. M., & Bishop, D. S. (1983). The McMaster Family Assessment Device. *Journal of Marital and Family Therapy, 9*(2), 171–180.

Epstein, N. B., Bishop, D. S., & Levin, S. (1978). McMaster Model of Family Functioning. *Journal of Marriage and Family Counseling, 4*(4), 19–31.

Finke, M. S., Huston, S. J., & Sharpe, D. L. (2006). Balance sheets of early boomers: Are they different from pre-boomers? *Journal of Family and Economic Issues, 27*(3), 542–561.

Hollinshead, A. B., & Redlich, F. C. (1958). *Social class and mental illness: A community study*. New York: Wiley.

Lamont, D. W., Parker, L., Cohen, M. A., White, M., Bennett, S. M., Unwin, N. C., et al. (1998). Early life and later determinants of adult disease: A 50 year follow-up study of the Newcastle Thousand Families cohort. *Public Health, 112*(2), 85–93.

Maziade, M., Bernier, H., Thivierge, J., & Cote, R. (1987). The relationship between family functioning and demographic characteristics in an epidemiological study. *Canadian Journal of Psychiatry—Revue Canadienne de Psychiatrie, 32*(7), 526–533.

Meyers, S. A., Varkey, S., & Aguirre, A. M. (2002). Ecological correlates of family functioning. *American Journal of Family Therapy, 30*(3), 257–273.

Miech, R. A., Caspi, A., Moffitt, T. E., Wright, B. E., & Silva, P. A. (1999). Low socio-economic status and mental disorders: A longitudinal study of causation and selection. *American Journal of Sociology, 104*(4), 1096–1131.

Miller, F. J. W., Court, S. D. M., Walton, W. S., & Knox, E. G. (1960). *Growing up in Newcastle-upon-Tyne*. London: Oxford University Press.

Miller, I. W., Epstein, N. B., Bishop, D. S., & Keitner, G. I. (1985). The McMaster Family Assessment Device: Reliability and validity. *Journal of Marital and Family Therapy, 11*(4), 345–356.

Moos, R. H. (1974). *Combined preliminary manual: Family, work and group environment scales*. Palo Alto: Consulting Psychology Press.

Moos, R. H., & Moos, B. S. (1986). *Family Environment Scale manual* (2nd ed.). Palo Alto: Consulting Psychology Press.

Olson, D. H., McCubbin, H., Barnes, H., Larsen, A., Moxen, M., & Wilson, M. (1982). *Family inventories*. St. Paul, MN: University of Minnesota.

Olson, D. H., Portner, J., & Lavee, Y. (1985). *Faces III—Family adaptability and Cohesion Scales*. St. Paul, MN: University of Minnesota.

Owen, A. J., Rowe, B. R., & Gritzmacher, J. E. (1992). Building family functioning scales into the study of at-home income generation. *Journal of Family and Economic Issues, 13*(3), 299–313.

Parker, L., Lamont, D. W., Unwin, N., Pearce, M. S., Bennett, S. M., Dickinson, H. O., et al. (2003). A lifecourse study of risk for hyperinsulinaemia, dyslipidaemia and obesity (the central metabolic syndrome) at age 49–51 years. *Diabetic Medicine, 20*(5), 406–415.

Ridenour, T. A., Daley, J. G., & Reich, W. (1999). Factor analyses of the Family Assessment Device. *Family Process, 38*(4), 497–510.

Roelofse, R., & Middleton, M. R. (1985). The Family functioning in adolescence questionnaire: A measure of psychosocial family health during adolescence. *Journal of Adolescence, 8*(1), 33–45.

Rutter, M. (1989). Pathways from childhood to adult life. *Journal of Child Psychology & Psychiatry & Allied Disciplines, 30*(1), 23–51.

Sawyer, M. G., & Sarris, A. (1988). Family Assessment Device: Reports from mothers, fathers and adolescents in community and clinic families. *Journal of Marital and Family Therapy, 14*(3), 287–296.

Stata (2002). Intercooled Stata for Windows (Version 7.0). College Station, TX: Stata Corporation.

Takyi, B. K., & Broughton, C. L. (2006). Marital stability in Sub-Saharan Africa: Do women's autonomy and socioeconomic situation matter? *Journal of Family and Economic Issues*, *27*(1), 113–132.

Tiffin, P. A., Pearce, M. S., & Parker, L. (2005). Social mobility over the lifecourse and self-reported mental health at age 50: Prospective cohort study. *Journal of Epidemiology & Community Health, 59*(10), 870–872.

Van den Troost, A., Vermulst, A. A., Gerris, J. R. M., Matthijs, K., & Welkenhuysen-Gybels, J. (2006). Effects of spousal economic and cultural factors on Dutch marital satisfaction. *Journal of Family and Economic Issues, 27*(2), 235–262.

Vescio, M. F., Smith, G. D., Giampaoli, S., & Group, M. R. (2003). Socio-economic position overall and cause-specific mortality in an Italian rural population. *European Journal of Epidemiology, 18*(11), 1051–1058.

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Wells, K. B., Kamberg, C., Brook, R., Camp, P., & Rogers, W. (1985). Health status, sociodemographic factors and the use of prescribed psychotropic drugs. *Medical Care, 23*(11), 1295–1306.

Wender, P. H., Rosenthal, D., Kety, S. S., Schulsinger, F., & Welner, J. (1973). Social class and psychopathology in adoptees: A natural experimental method for separating the roles of genetic and experimental factors. *Archives of General Psychiatry, 28*(3), 318–325.

Wilhelm K., Brownhill S., & Boyce, P. (2000). Marital and family functioning: Different measures and viewpoints. *Social Psychiatry & Psychiatric Epidemiology, 35*(8), 358–365.